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AUTHOR Grayson, Dolores S.
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ABSTRACT

The objectives of the Gender Expectations and Student Achievement (GESA) program are to reduce the disparity in the frequency distribution of teacher interactions with males as compared to those with females; to reduce stereotyping by teachers; to increase non-stereotypical interaction with students; and to produce an increased achievement in mathematics and reading by girls and boys in classrooms of teachers receiving GESA training. The conceptual framework includes the three primary factors generally accepted as affecting academic achievement: curriculum, the learning environment, and classroom interactions. GESA is research-based and participating teachers are introduced to the literature, provided additional information on areas of disparity, and given examples of the impact on students. A major part of the training includes an action research component during which teachers observe and code specific behaviors. The data is used to increase awareness and to assess the program's effectiveness, not to evaluate participants. This paper focuses on the expansion of the program into implementation, with limited reference to the developmental stage. (JD)

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IMPLEMENTING
THE
GENDER EXPECTATIONS AND STUDENT ACHIEVEMENT (GESA)
TEACHER TRAINING PROGRAM

By

DOLORES A. GRAYSON

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IMPLEMENTING THE
GENDER EXPECTATIONS AND STUDENT ACHIEVEMENT (GESA)
TEACHER TRAINING PROGRAM

For more than a decade, researchers have accumulated evidence of differential treatment in classrooms resulting in different results for males and females. (Sadker and Sadker, 1982 and 1984; Lockheed and Harris, 1982; Best, 1983; Hall & Sandler, 1982)

This research has added to a body of knowledge related to teacher's perceived expectations. (Brophy and Good, 1970 and 1978) Repeatedly the studies have indicated a correlation between these perceived expectations and classroom interactions and their impact on academic achievement. (Kerman, Kimball and Martin, 1980)

This difference in expectations, influencing interactions and impacting achievement is manifested in some subject areas more than others. For example, Fennema states that "it appears reasonable to assume that some types of teacher-pupil interactions influence the development of one's internal motivational beliefs" (Fennema and Peterson, 1985), contributing to gender-related differences in mathematics.

A review of the literature indicates that gender bias influencing interaction patterns and achievement is evident in five major areas. These will be referred to as the areas of gender disparity and include the following: instructional contact, grouping and organization, classroom

control, enhancing self-esteem and evaluation of student performance. Parallel information related to ethnic and cultural diversity also surfaces within these categories.

The Gender Expectations and Student Achievement (GESA) program is designed to utilize the previous efforts and counter the areas of disparity with research-based instructional strategies and motivational interactions. The objectives are to reduce the disparity in the frequency distribution of interactions with males and females by teachers; to reduce stereotyping by the teachers; to increase non-stereotypical interaction with students; and to produce increased achievement in mathematics and reading by girls and boys in classrooms of teachers receiving GESA training. The conceptual framework includes the three primary factors generally accepted to effect academic achievement. These include the curriculum (content and materials), the learning environment and the classroom interactions.

GESA is an intervention program and was not developed for research purposes. It was developed to respond to the research with proven effective educational strategies and resources. It is research-based and the participating teachers are introduced to the literature through a variety of studies, provided additional information on the areas of disparity and given examples of the impact on students. In addition, a major part of the training includes an action research component during which teachers observe and code specific behaviors. The data is used to increase awareness and to assess the program's effectiveness, not to evaluate the teacher participant.

The development and pilot phase of the GESA program was the topic of a previous paper (Grayson and Martin, 1984). The remainder of this paper will focus on the expansion of the program into implementation, with limited reference to the developmental stage. A comprehensive handbook has been published to accompany the program. (Grayson and Martin, 1985) The format for the GESA program is adapted from the inservice training model developed by Los Angeles County Office of Education staff for the Teacher Expectations and Student Achievement (TESA) program. TESA addresses the differential expectations teachers hold for students labeled low achievers. Dr. Mary Martin, originator of the TESA program, is a co-developer of the GESA program.

METHOD

The GESA program is a culmination of eight years of collecting and comparing data and effective strategies. It is based on widely-held theories of change management and staff development. Like TESA, GESA is designed around monthly meetings where teachers behaviors which reflect expectations are discussed, followed by teachers observing and coding each other's interactions in the classroom. This provides the action research climate in which teams of teachers examine the impact of deliberately counteracting gender bias on their own and their students' behavior and on student learning.

Each workshop addresses an area of disparity as the theme for the session. Consequently, there are five monthly workshops filled with information and activities and one follow-up workshop, for a total of six sessions.

The interactions selected for GESA are gender sensitive, according to research. That is, teachers typically modify these interactions depending on the students' sex. The curriculum issues strand helps teachers reduce gender bias in instructional materials and methods. The accompanying chart provides the conceptual framework for the program. (See Figure 1)

Each unit requires approximately one month. During the month, participating teachers do the following:

- Attend a three-hour workshop. At the workshop, learn how to record observations in teammates' classrooms, discuss an area of gender disparity and review curriculum resources which address gender equity issues.

GENDER EXPECTATIONS AND STUDENT ACHIEVEMENT (GESA)

Five Major Areas of Disparity (WORKING THEMES)	Learning Climate (INTERACTIONS)	Instructional Management (CURRICULUM-RELATED)
I. Instructional Contact	Response Opportunities/ Acknowledgment	Evaluating Materials for Bias
II. Grouping/Organization	Wait Time/Physical Closeness	Math/Science/Technology
III. Discipline	Touching/Reproof	Multicultural Resources
IV. Self-Concept	Probing/Listening	Gender Balance in History
V. Evaluation	High Level Questioning/ Analytical Feedback	Physical Activities

Grayson and Martin, 1984

- Observe in the classrooms of three other participants (teammates). One-half day of release time enables the participant to observe for one-half hour in each of the teammates classrooms on the same day.) Observation procedures are very simple and do not require preparation other than the preceeding workshop.

Each of the observation team members observe in each participating teammates calssroom for thirty minutes. All observations are scheduled in advance. Each member knows exactly what the observer is recording.

Whether or not the curriculum resources offered at the workshop are used is up to the participant. They may be put aside for use at another time or one resource or curriculum area may be used throughout all of the units.

Most of the curriculum resources consists of materials and strategies designed for immediate use in the classroom, without extensive additional training. Two successful sources include the EQUALS project and the National Women's History Project.

TARGET POPULATION

The GESA program is designed for use with classroom teachers, K - Post-secondary. During the developmental/pilot phase in 1983-84, teams of 3 or 4 teachers from five school districts in Los Angeles County participated in the program. The reactions and ideas of these teachers and their students enriched and shaped the program.

During the 1984-85 year, all of the pilot teachers have had an opportunity to participate in a three-day intensive facilitator workshop series and many are replicating GESA in their districts. Data collected by them will be utilized as part of the field-test data base.

The implementation phase has included two rounds of teacher workshops. One round of monthly workshops is being conducted at the Los Angeles County Education Center. Teams of teachers from six districts are field-testing the program and providing feedback. Districts represented are Centinela Unified School District, Claremont Unified School District, Garvey School District, Glendora Unified School District, Walnut Valley Unified School District and West Covina Unified School District. The twenty-four participants include seven males and seventeen females. (In Los Angeles County, females account for approximately 70% of the teaching population, males account for approximately 30%.) Grade levels ranging from primary through adult education and a variety of subject areas are represented.

The second field-test site is located in the Northern portion of Los Angeles County in Antelope Valley and is hosted by the Palmdale School District. Additional districts participating at that site include Westside and Wilsona, two smaller districts in the county. Five male and twenty female elementary teachers and administrators are attending. The forty-nine participants work with over 2,500 students.

These rounds are scheduled to conclude in May and June of 1985, respectively.

DATA COLLECTION

Several instruments are used to obtain information from the participants and to evaluate the effectiveness of the program.

A preliminary teacher questionnaire and student data form is completed by each participant providing client information. A pre-and post-Teacher's Self-Evaluation survey is administered and a pre-and post-attitude survey is administered by the teachers to their students.

The observation data collected by the teachers serve as part of the process or formative evaluation and standardized test scores in reading and mathematics (CTBS) are used to determine whether target students in the classes taught by teachers participating in GESA achieved higher gains than a comparison group, for the produce or summative evaluation.

Coding of students is by gender and ethnicity. Achievement scores are recorded on target students pre-selected by the teacher. Interactions with all students are coded for frequency distribution.

When analyzing the observation data, a coefficient of equity (Sadker & Sadker, 1984) is computed to allow for the percentage of males and females in each class.

RESULTS

As previously mentioned, the data from the field test will not be compiled and analyzed until the conclusion of the two rounds of workshops currently being conducted.

The following are results from the pilot phase:

- 1) Pretest observations of participant ranged from 11% for females and 89% for males, or a 9 to 1 ratio (Highest level of disparity) to 25% for females to 75% for males, or a 4 to 1 ratio (lowest level of disparity) (The interaction observed was "response opportunity")
- 2) Post-test observations of participants was 43% for females to 57% for males. (Females comprised 51% of the total student population)
- 3) Over 70% of all students marking "male" or "female" on a pre-test survey ("Who Should") marked "both" on the post test.
- 4) Students in classes taught by teachers participating in GESA achieved a mean gain of 2.1% in reading and 7.0% in math, as assessed by the California Test of Basic Skills (CTBS).
(No comparison data was analyzed)

- 5) The highest math gain recorded by students in classes taught by teachers participating in GESA was a mean gain of 18.7% in a class with a large population of ESL students, predominantly Hispanic and Asian.
- 6) The highest reading gain recorded by students in classes taught by teachers participating in GESA was a mean gain of 7.4% in a class with a large population of Asian Pacific students.
- 7) All participating teachers report benefiting professionally from involvement in collegial observation and coding and have talked with their principals and other staff members about GESA.
- 8) All participating teachers have identified at least one area of disparity corrected by them, at least one specific interaction as most beneficial and a curricular change that they have implemented in their classroom.

CONCLUSIONS

Based on the preliminary data, the following conclusions seem reasonable:

- Teachers who have participated in the GESA program have reduced the disparity in the frequency distribution of their interactions with males and females.
- Teachers who have participated in the GESA program report an increased use of non-stereotypical interactions, materials and activities.
- Preliminary data indicate that students in classes taught by teachers participating in GESA achieve significant gains in reading and math as assessed by the CTBS scores.

Whether or not the significant gains are higher than a comparison group remains to be analyzed from the field test data.

Finally, there is some indication that the areas of disparity may be generic and that GESA positively impacts other parallel factors subjected to past discrimination such as race, national origin and cultural diversity.

Future plans include conducting GESA workshops with an identified target population to explore the latter possibility more extensively.

FOLLOW-UP AND DISSEMINATION

In addition to the teacher workshops and the handbook, a three-day Facilitator workshop has been developed in a trainer-of-trainers model. These are accompanied by a Facilitator supplement and designed to prepare the participants to conduct the teacher workshops. The development and implementation of the GESA Facilitator program will be the topic for future investigation and discussion.

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